

# **QING YUE**

*Ph.D.*, Research Scientist  
Jet Propulsion Laboratory, California Institute of Technology  
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## **EDUCATION**

*Ph.D. Atmospheric and Oceanic Sciences in 2009*  
Department of Atmospheric & Oceanic Sciences, University of California, Los Angeles  
*Dissertation:* Investigation of the Radiative Forcings of Thin Cirrus in the Tropical Atmosphere Using Remote Sensing Data (with Jacob A. Bjerknes Memorial Award)  
*Advisor:* Dr. Kuo-Nan Liou

*Bachelor of Science Atmospheric Sciences in 2003*  
Department of Atmospheric Sciences, School of Physics, Beijing University, Beijing, China

## **POSITION**

- Jet Propulsion Laboratory, California Institute of Technology  
Research Scientist, 2014-present
- Joint Institute for Regional Earth System Science & Engineering, University of California, Los Angeles / Jet Propulsion Laboratory, California Institute of Technology  
Assistant Researcher, 2012-2014
- Jet Propulsion Laboratory, California Institute of Technology  
Postdoctoral Researcher, 2009-2012

## **RESEARCH INTEREST**

- Spectral and broadband radiative transfer of cloud and aerosols, and its applications in regional and climate models.
- Remote sensing of clouds and atmosphere: retrieval and validation, multi-sensor satellite data fusion, in-situ and field campaign observations and analysis.
- Radiative forcing of cloud and aerosol.
- Climate data record from multi-sensor satellite observations, reanalysis and model analysis data.
- Cloud-topped maritime boundary layer from multi-sensor satellite observations and numerical model studies.

## PUBLICATIONS

1. Sun Wong, E. J. Fetzer, M. Schreier, G. Manipon, E. F. Fishbein, B. H. Kahn, **Q. Yue**, and F. W. Irion, 2014, Cloud-induced uncertainties in AIRS and ECMWF temperature and specific humidity, *in preparation*.
2. Liu, Z., K. N. Liou, W.-L. Lee, **Q. Yue**, and Y. Gu, 2014: Absorbing aerosol impact on snow albedo reduction in the southern Tibetan Plateau, *Atmos. Environ.*, submitted.
3. **Yue, Q.**, B. H. Kahn, M. Schieier, H. Xiao, E. J. Fetzer, J. Teixeira, and K. Suselj, 2013: Transitions of cloud-topped marine boundary layers characterized by AIRS and MODIS observations, and large eddy simulations, *J. Geophys. Res.*, 118, 8598–8611 DOI: 10.1002/jgrd.50676.
4. **Yue, Q.**, E. J. Fetzer, B. H. Kahn, S. Wong, G. Manipon, A. Guillaume, and B. Wilson, 2013: Cloud-state-dependent sampling in AIRS observations based on CloudSat cloud classification, *J. of Climate*, **26**, 8357–8377, doi: <http://dx.doi.org/10.1175/JCLI-D-13-00065.1>.
5. Kahn, B. H., Irion, F. W., Dang, V. T., Manning, E. M., Nasiri, S. L., Naud, C. M., Blaisdell, J. M., Schreier, M. M., **Yue, Q.**, Bowman, K. W., Fetzer, E. J., Hulley, G. C., Liou, K. N., Lubin, D., Ou, S. C., Susskind, J., Takano, Y., Tian, B., and Worden, J. R., 2013: The Atmospheric Infrared Sounder Version 6 cloud products, *Atmos. Chem. Phys. Discuss.*, **13**, 14477-14543, doi:10.5194/acpd-13-14477-2013.
6. M. M. Schreier, B. H. Kahn, K. Suselj, J. Karlsson, S. C. Ou, **Q. Yue**, and S. L. Nasiri, 2013, Atmospheric parameters in a subtropical cloud regime transition derived by AIRS+MODIS - Observed statistical variability compared to ERA-Interim, *Atmos. Chem. Phys.*, **13**, 24051-24085, doi:10.5194/acpd-13-24051-2013.
7. Liou, K. N., Y. Takano, **Q. Yue** and P. Yang, 2013: On the Radiative Forcing of Contrail Cirrus Contaminated by Black Carbon, *Geophys. Res. Lett.*, **40**, 778–784, doi:10.1002/grl.50110.
8. Steve S. C. Ou, B. H. Kahn, K. N. Liou, Y. Takano, M. M. Schreier, and **Q. Yue**, 2011: Retrieval of Cirrus Cloud Properties from the Atmospheric Infrared Sounder: The *k*-Coefficient Approach Combined with SARTA plus Delta-Four Stream Approximation, *IEEE Trans. Geosci. Rem. Sens.*, **99**, 1–15.
9. **Yue, Q.**, Brian H. Kahn, Eric J. Fetzer, and João Teixeira, 2011: Relationship between oceanic boundary layer clouds and lower tropospheric stability observed by AIRS, CloudSat and CALIOP, *J. Geophys. Res.*, **116**, D18212, doi:10.1029/2011JD016136.
10. **Yue, Q.**, and K. N. Liou, 2009: Cirrus Cloud Optical and Microphysical Properties Determined from AIRS Infrared Spectra, *Geophys. Res. Lett.*, **36**, L05810, doi:10.1029/2008GL036502.
11. Liou, K. N., Y. Gu, **Q. Yue**, G. McFarquhar, 2008: On the correlation between ice water content and ice crystal size and its application to radiative transfer and general circulation models, *Geophys. Res. Lett.*, **35**, L13805, doi:10.1029/2008GL033918.

12. **Yue, Q.**, K. N. Liou, S. C. Ou, B. H. Kahn, P. Yang, and G. G. Mace, **2007**: Interpretation of AIRS data in thin cirrus atmospheres based on a fast radiative transfer model. *J. Atmos. Sci.*, 64, 3827–3842.
13. Kahn, B.H., C. Liang, A. Eldering, A. Gettelman, **Q. Yue**, and K. N. Liou, **2007**: Tropical thin cirrus and relative humidity observed by the Atmospheric Infrared Sounder, *Atmos. Chem. Phys.*, 8, 1501–1518.

## PENDING PROPOSALS

- 2013 Co-I for “Single-footprint retrievals of water vapor profiles and cloud properties from AIRS”, submitted to *NNH13ZDA001N-TERAQ: The Science of Terra and Aqua*.
- 2014 Co-I for “Continuity of the AIRS/AMSU cloud products for Suomi NPP”, submitted to *Suomi NPP*
- 2014 Co-I for “Single-footprint retrievals of atmospheric properties from CrIS”, submitted to *Suomi NPP*
- 2014 Co-I for “Test Data and Performance Metrics for CrIMSS Retrieved Products”, submitted to *Suomi NPP*
- 2014 Collaborator for “Climate Trends Using Hyperspectral Infrared Satellite Sounders”, submitted to *Atmospheric Composition: Spectral Climate Signals*.

## HONORS AND AWARDS

- 2008 Jacob A. Bjerknes Memorial Award, UCLA
- 2008~2009 Dissertation Year Fellowship, UCLA
- 2008~2009 NASA the Earth System Science (ESS) Fellowship
- 2007~2008 NASA the Earth System Science (ESS) Fellowship
- 2006~2007 Pauley Fellowship, UCLA
- 2003~2004 Pauley Fellowship, UCLA
- 2002 Award of Excellent Performance, Peking University
- 2000 Xiyue Fellowship, Peking University, China

## SELECTED ORAL PRESENTATIONS

1. **Yue, Q.**, E. J. Fetzer, B. H. Kahn, S. Wong, G. Manipon, A. Guillaume, and B. Wilson, **2014**, Cloud-State-dependent sampling in AIRS Observations based on CloudSat cloud classification, presented at Jet Propulsion Laboratory, California Institute of Technology.
2. **Yue, Q.**, B. H. Kahn, H. Xiao, M. M. Schreier, K. Suselj, E. J. Fetzer, and J. Teixeira, **2013**, Transition of cloud-topped marine boundary layer characterized by AIRS, MODIS, and a large eddy simulation (LES) model, presented at Jet Propulsion Laboratory, California Institute of Technology, November 2013.
3. **Yue, Q.**, B. H. Kahn, M. M. Schreier, K. Suselj, H. Xiao, E. J. Fetzer, and J. Teixeira, **2011**, Cloud-topped marine boundary layer transition and cloud top entrainment instability (CTEI) observed by A-Train satellites and comparison with numerical model studies, presented in 2011 AGU Fall meeting, San Francisco, American Geophysical Union.

4. **Yue, Q.**, 2011, A-train observations of clouds and thermodynamic profiles: An emphasis on cloud state-dependent sampling, tropical cirrus, and marine boundary layer clouds. Jet Propulsion Laboratory, Feb. 18, 2011.
5. **Yue, Q.**, E. J. Fetzer, B. H. Kahn, and J. Teixeira, **2010**, On the boundary layer low stratiform clouds from the collocated AIRS and CloudSat data, California Institute of Technology, May 18, 2010, invited.
6. **Yue, Q.**, B. H. Kahn, E. J. Fetzer, and J. Teixeira, **2010**, Relationship between oceanic boundary layer clouds and lower tropospheric stability observed by AIRS, CloudSat, and CALIOP, Aerosol and Cloud Seminar, Jet Propulsion Laboratory, California Institute of Technology, October 11, 2010.
7. **Yue, Q.**, and K. N. Liou, **2008**: Radiative Properties of Tropical Thin Cirrus Based on Remote Sensing Data: Retrieval and Radiative Forcing, 18 July 2008, seminar at NASA Jet Propulsion Laboratory, Pasadena, California.
8. **Yue, Q.**, K. N. Liou, S. C. Ou, B. H. Kahn, P. Yang, G. J. Mace, and J. M. Comstock, **2006**: Interpretation of AIRS thin cirrus spectra using a fast radiative transfer model and ARM measurements, the 12th Conference on Cloud Physics and 12th Conference on Atmospheric Radiation of AMS, 10 –14 July 2006, Madison, Wisconsin, selected oral presentation.
9. **Yue, Q.**, K. N. Liou, S. C. Ou, B. H. Kahn, P. Yang, and G. J. Mace, **2005**: Interpretation of Atmospheric Infrared Sounder (AIRS) measurements in clear and cirrus cloudy atmosphere based on a fast radiative transfer model, IAMAS 2005 Meeting, 2–11 August 2005, Beijing, China, The International Association of Meteorology and Atmospheric Sciences (IAMAS) / International Union of Geodesy and Geophysics (IUGG).

## TEACHING AND OUTREACH ACTIVITY

- 2014 Review panelist for the NASA New Investigator Program
- 2014 ~ pres. Executive Board member in the Southern California Chapter of Chinese-American Oceanic and Atmospheric Association (COAA), Los Angeles, California.
- 2013 Reviewer for the NASA Earth and Space Science Fellowship (NESSF).
- 2008 ~ 2009 Executive Board member in the Southern California Chapter of COAA, Los Angeles, California.
- 2007~2009 Reader and assistant for “Atmospheric Radiation” and “Remote Sensing”  
Department of Atmospheric & Oceanic Sciences, University of California, Los Angeles.
- 2004 Teaching Assistant for “Introduction to Atmospheric Environment”,  
Department of Atmospheric & Oceanic Sciences, University of California, Los Angeles.
- July 2002 Internship at Yunnan Environmental Protection Bur